UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/538,030	03/29/2000	Peter John Turley	PD-990167	7475

22462 7590 11/30/2004

GATES & COOPER LLP
HOWARD HUGHES CENTER
6701 CENTER DRIVE WEST, SUITE 1050
LOS ANGELES, CA 90045

EXAMINER	
PHUONG, DAI	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/538,030	TURLEY ET AL.
	Examiner	Art Unit
	Dai A Phuong	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6-10* is/are allowed.

6)☒ Claim(s) *1-5,11 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/29/2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Peyrovian (U.S. 6,236,833).

Regarding claim 1, Peyrovian discloses a switch matrix for coupling an uplink beam to a demodulator, comprising:

an input module 20 (col. 2, lines 64-67), the input module having a plurality of inputs at least equal to a number of cells in a reuse pattern (col. 2, lines 64-67), the inputs receiving at least one uplink beam and a plurality of outputs (col. 2, lines 53-67), the plurality of outputs at least equal to a number of subbands in the uplink beam (col. 3, lines 40-45); and

an output module 10 (fig. 1, col. 2, lines 53 to col. 3, lines 45-56), the output module coupled to the input module, for selectively coupling the outputs from the input module to an output of the output module (fig. 1, col. 2, lines 53 to col. 3, lines 3-56), the output of the output module 10 (fig. 1, col. 2, lines 53 to col. 3, lines 45-56) coupled to a demodulator 14 (fig. 1, col. 3, lines 45-56) thereto.

Regarding claim 2, Peyrovian discloses all the limitation in claim 1. Further, Peyrovian discloses the switch matrix wherein the output module 10 is directly coupled to the input module 20 (col. 2, lines 53 to col. 3, lines 56).

Regarding claim 3, Peyrovian discloses all the limitation in claim 1. In addition, Peyrovian discloses the switch matrix wherein the input module comprises redundant modules 22 (col. 2, lines 64-67).

Regarding claim 4, Peyrovian discloses all the limitation in claim 1. However, Peyrovian discloses the switch matrix wherein the input module accepts uplink beams of different polarizations (col. 2, lines 53 to col. 3, lines 7).

Regarding claim 5, Peyrovian discloses all the limitation in claim 1. Moreover, Peyrovian disclose the switch matrix wherein the input module accepts uplink beams of a single polarization (col. 2, lines 53 to col. 3, lines 7)

Regarding claim 11, Peyrovian discloses a method for switching uplink signals through a switch matrix in a satellite system, the uplink signal generated by a cell-based transmission matrix, wherein a frequency reuse pattern is used throughout the cell matrix and the uplink signal comprises subband signals, comprising:

grouping the uplink signals into a plurality of groups (col. 2, lines 53 to col. 3 lines 7), the number of groups at least equal to a number of cell-reuse patterns of the cell-based transmission matrix (col. 2, lines 53 to col. 3 lines 7), each group comprising a signal from each frequency used in the frequency reuse pattern (col. 3, lines 45-57);

separating each group of uplink signals into subband signals (col. 3, lines 45-57 and col. 4, lines 25-30);

grouping similar subband signals from the groups of uplink signals to produce groups of similar subband signals (col. 3, lines 40-57 and col. 4, lines 25-30); and

forwarding the groups of similar subband signals to demodulators for processing within the satellite system (col. 3, lines 40-57 and col. 4, lines 25-30).

Regarding claim 12, Peyrovian discloses all the limitation in claim 11. Further, Peyrovian discloses the method wherein the uplink signals comprise signals of different polarizations (col. 2, lines 53 to col. 3, lines 7).

Allowable Subject Matter

3. Claims 6-10 are allowable over prior art of record.

Claims 7-10 are allowed as being depended on independent claim 6.

The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record and considered pertinent to the application's disclosure does not disclose nor fairly suggest the method for switching uplink signal through a switch matrix in a satellite system: **a plurality of power splitters, wherein the plurality of power splitter is at least equal to the number of cells in the reuse pattern for the satellite system, wherein each power splitter splits each input into a plurality of substantially equal power outputs, a number of power outputs at least equal to a number of subbands used by the satellite system.**

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Assal et al. (U.S. 5,220,320) switching element and crossbar switch matrices

Assal et al. (U.S. 4,931,802) multiple spot-beam system

Alaria et al. (U.S. 4,480,328) communication via satellite

Nakagome et al. (U.S. 4,456,988) satellite repeater

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 703-605-4373. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dai Phuong
AU: 2685
Date : 11-19-2004

W. R. YOUNG
PRIMARY EXAMINER